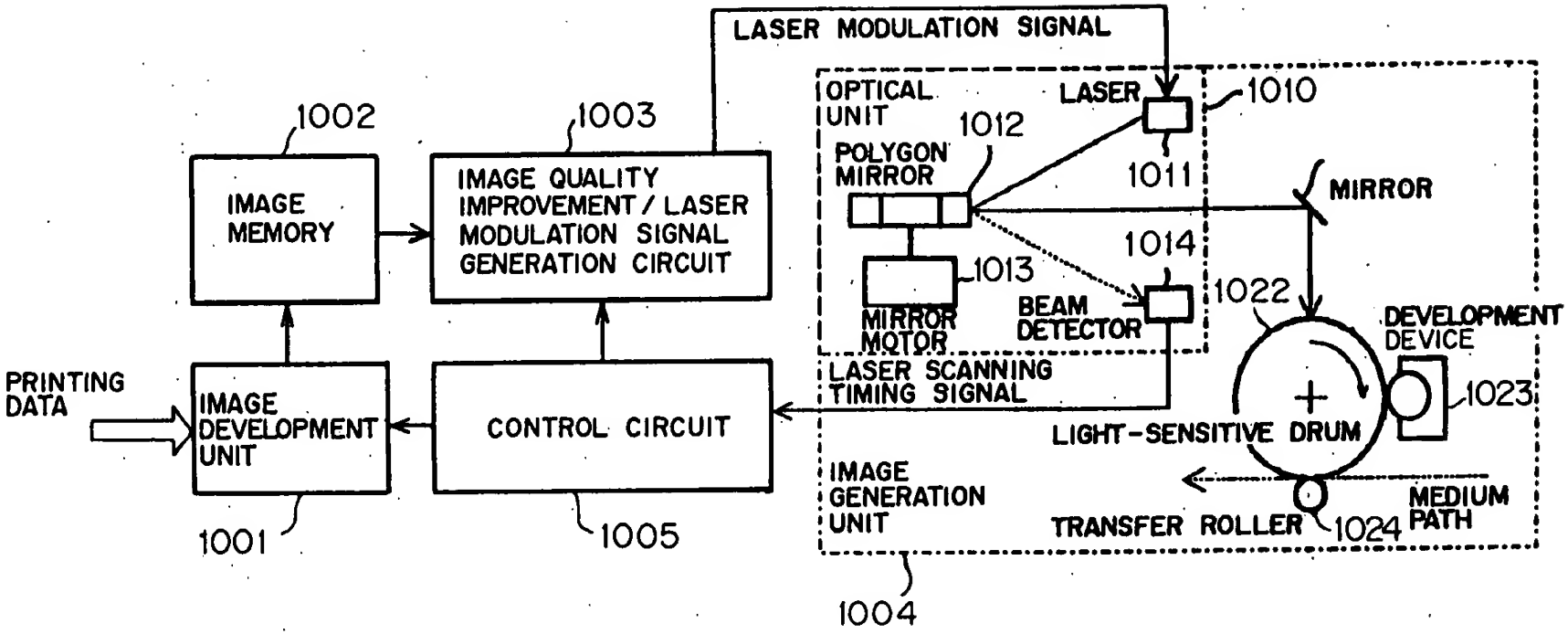

FIG. 1 PRIOR ART

0006207 EP1862960

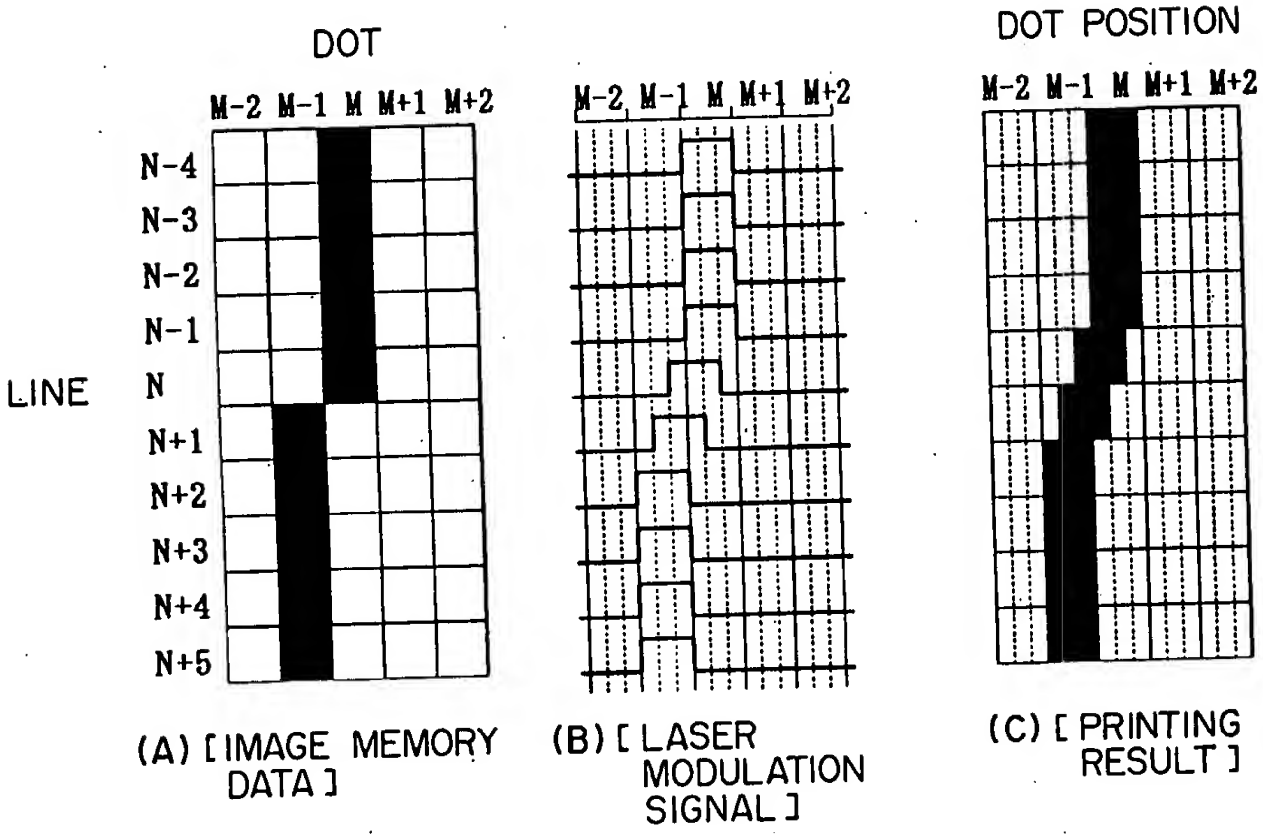

FIG. 2 PRIOR ART

0006E0 E81865E0

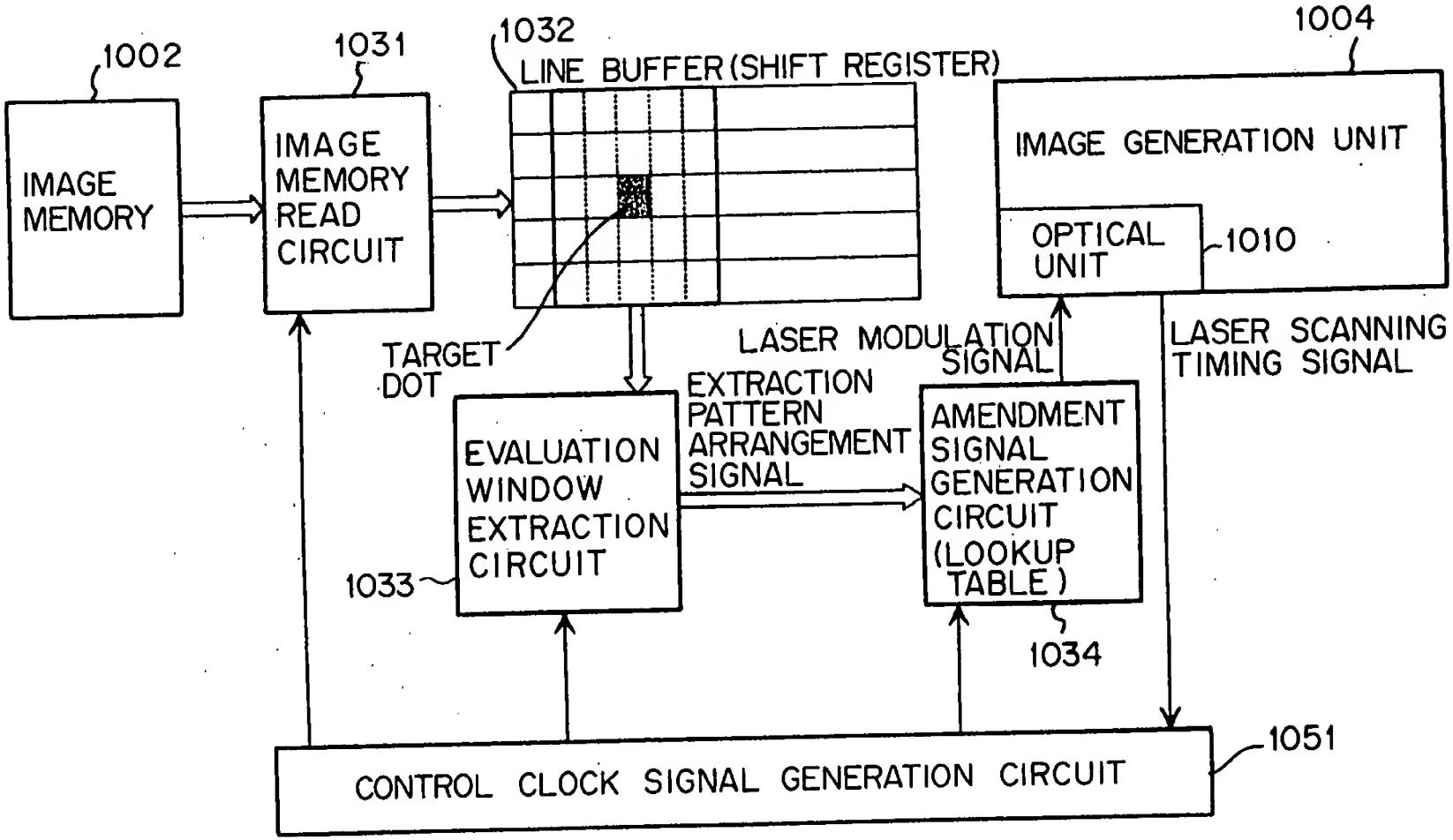

FIG. 3 PRIOR ART

Document Scanned

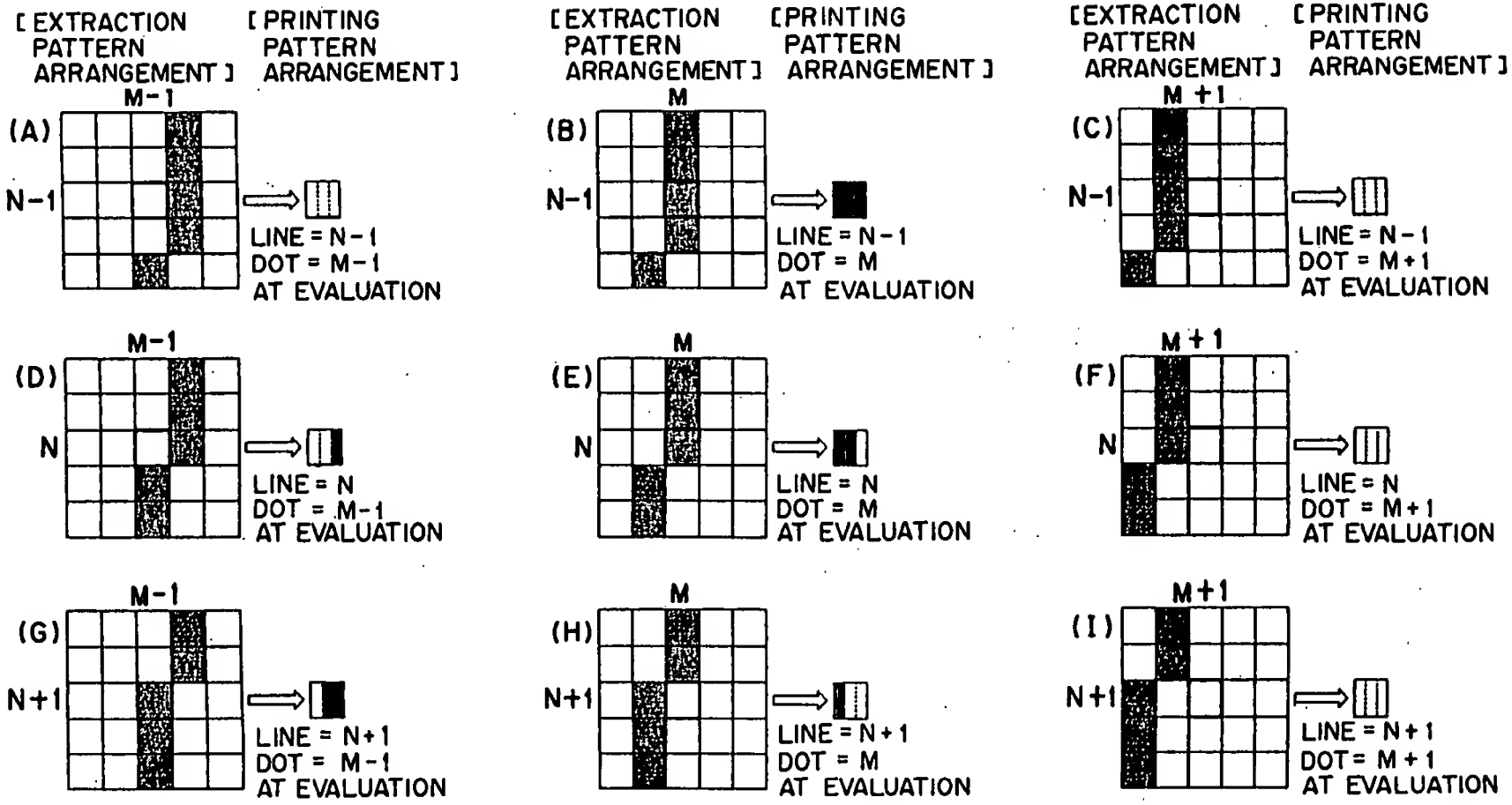

FIG. 4 PRIOR ART

000660 "6h86560

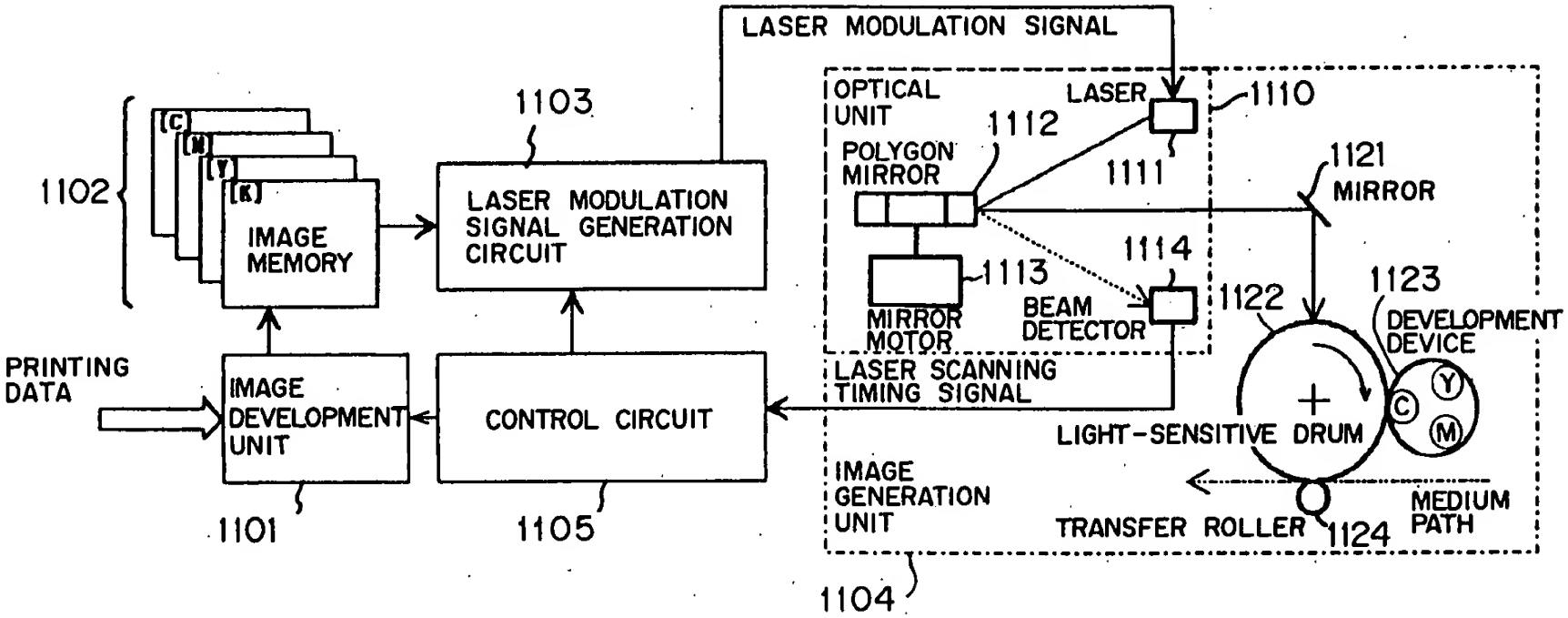

FIG. 5 PRIOR ART

0006E0' E8H6E560

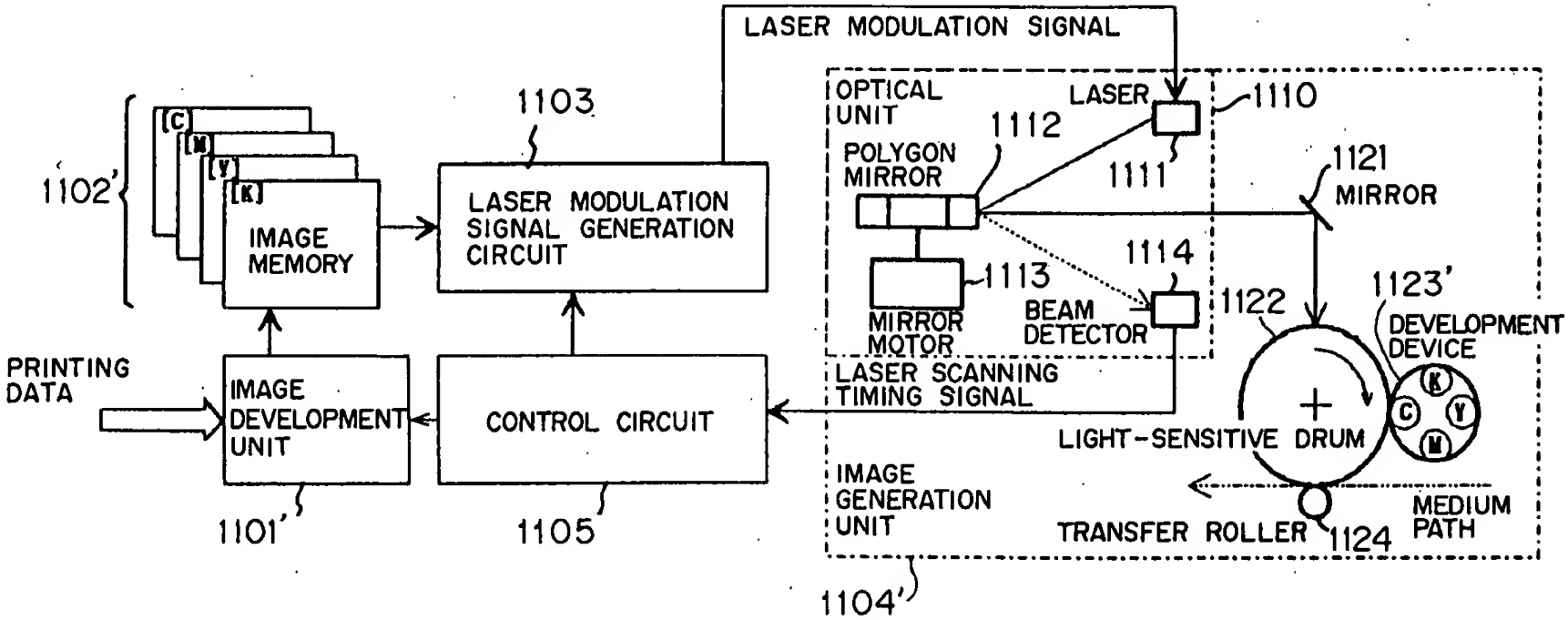

FIG. 6 PRIOR ART

000660 "6h66560

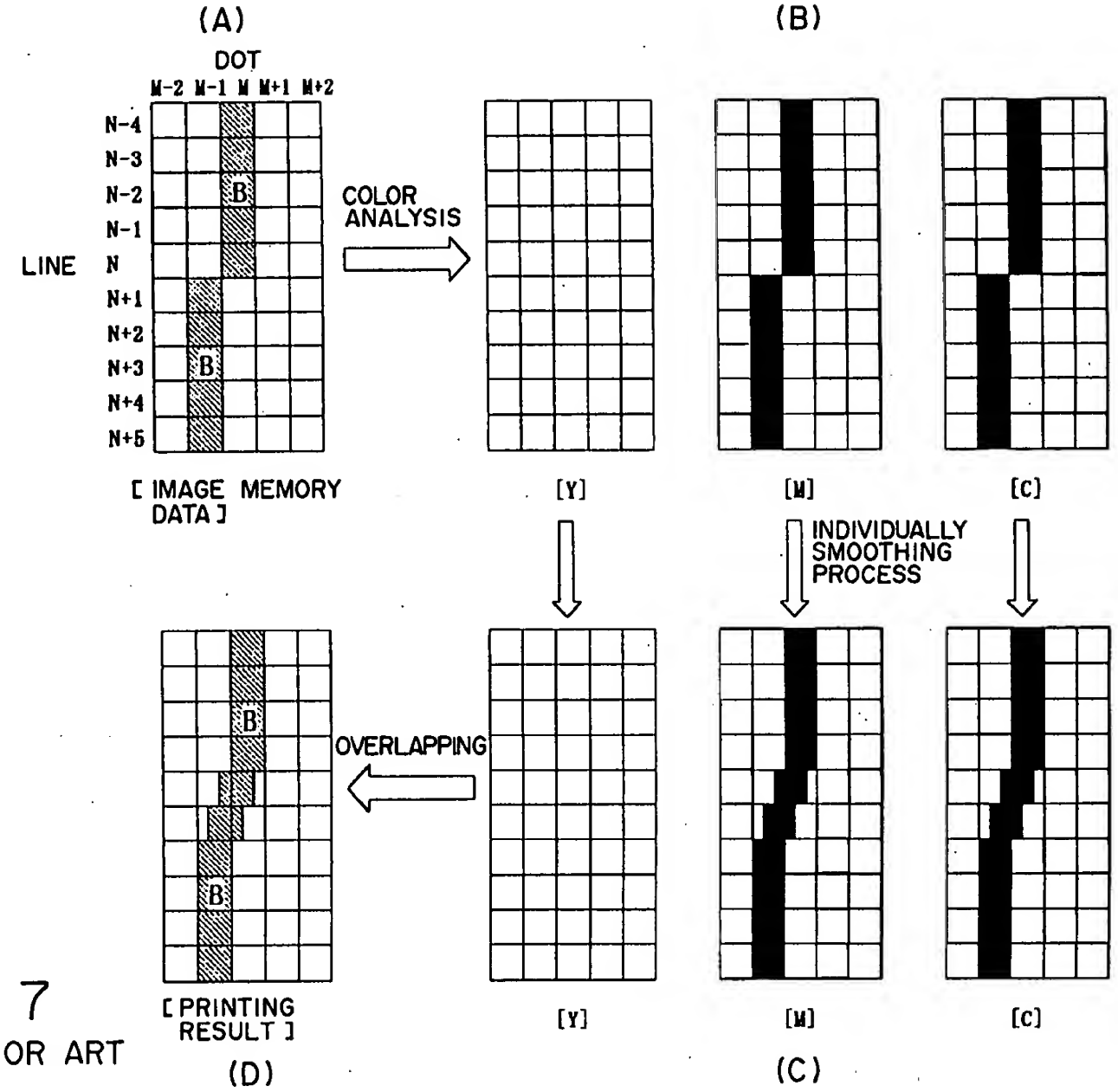

FIG. 7
PRIOR ART

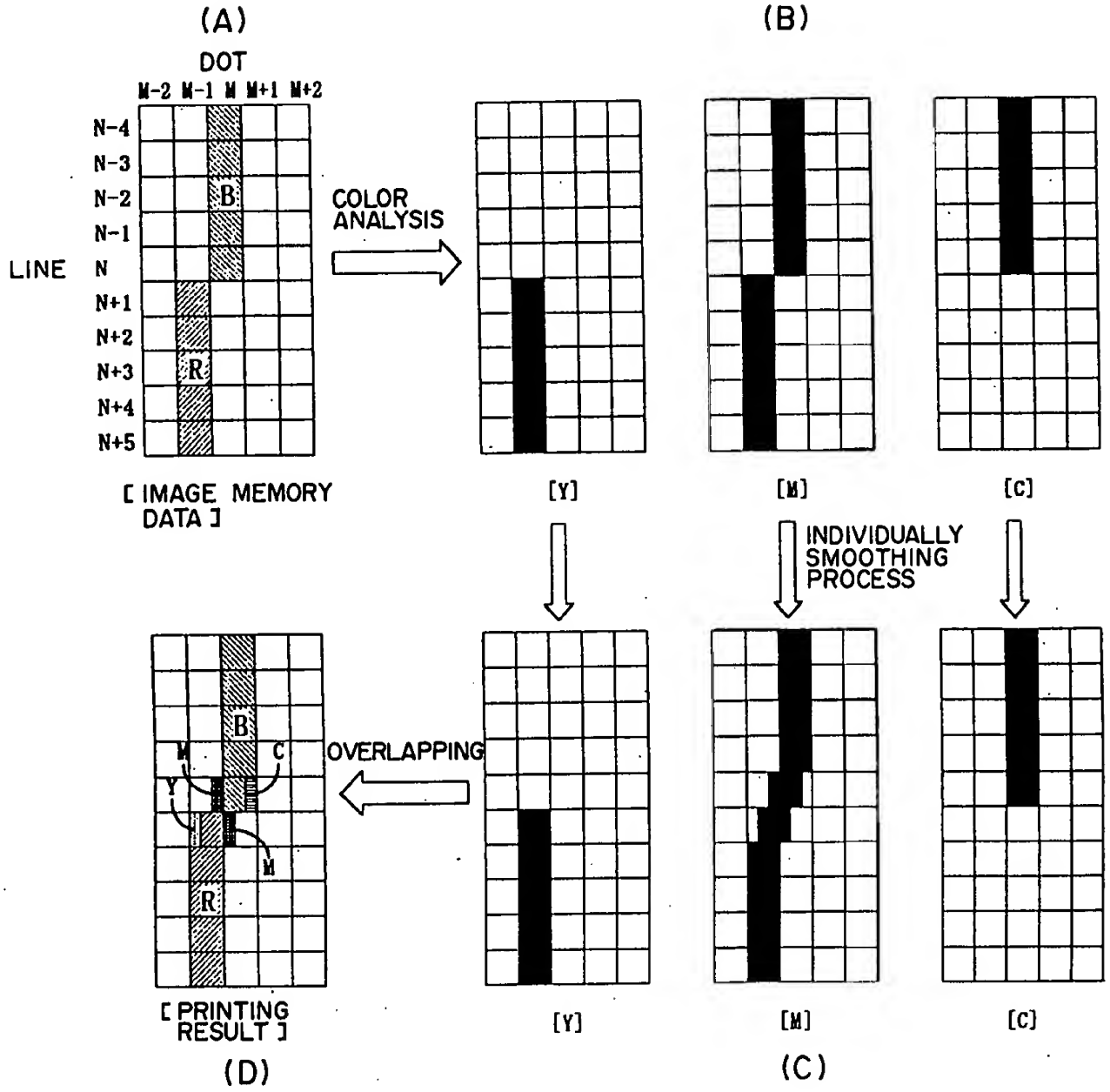

FIG. 8 PRIOR ART

0006E0'E8H8ES60

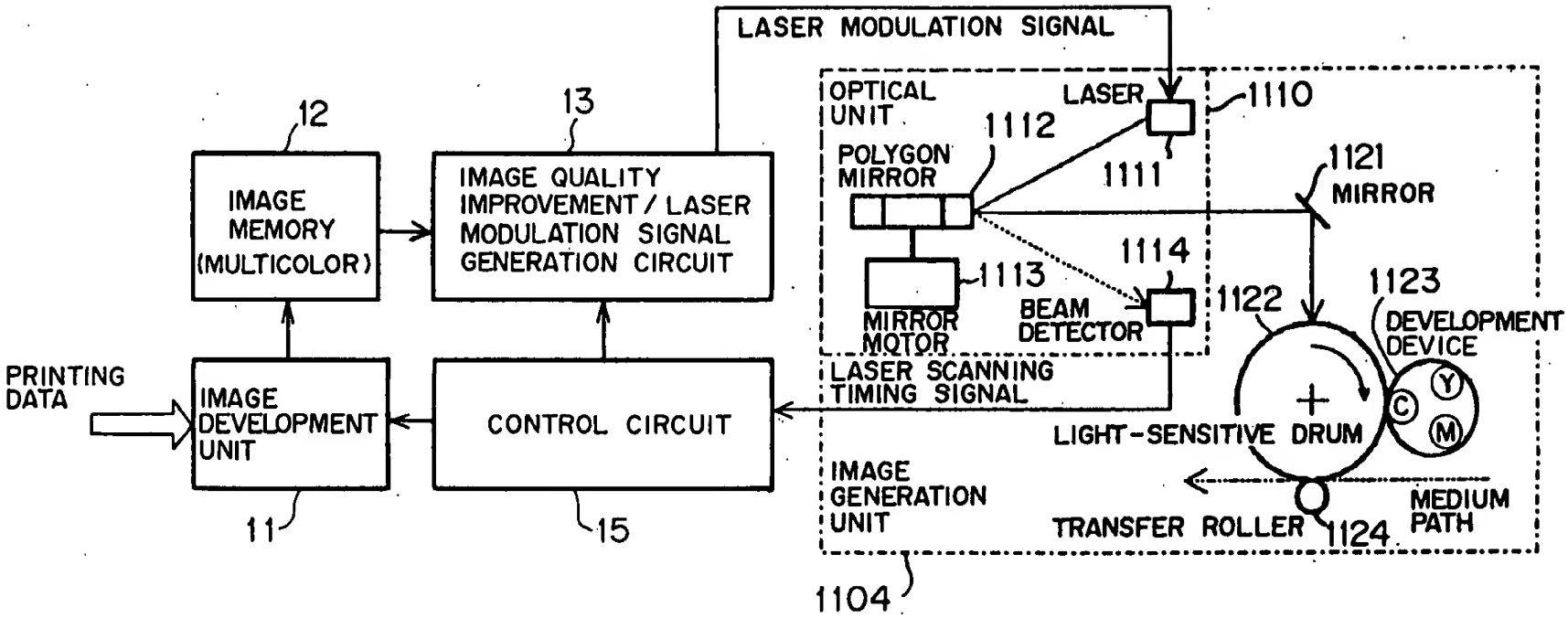

FIG. 9

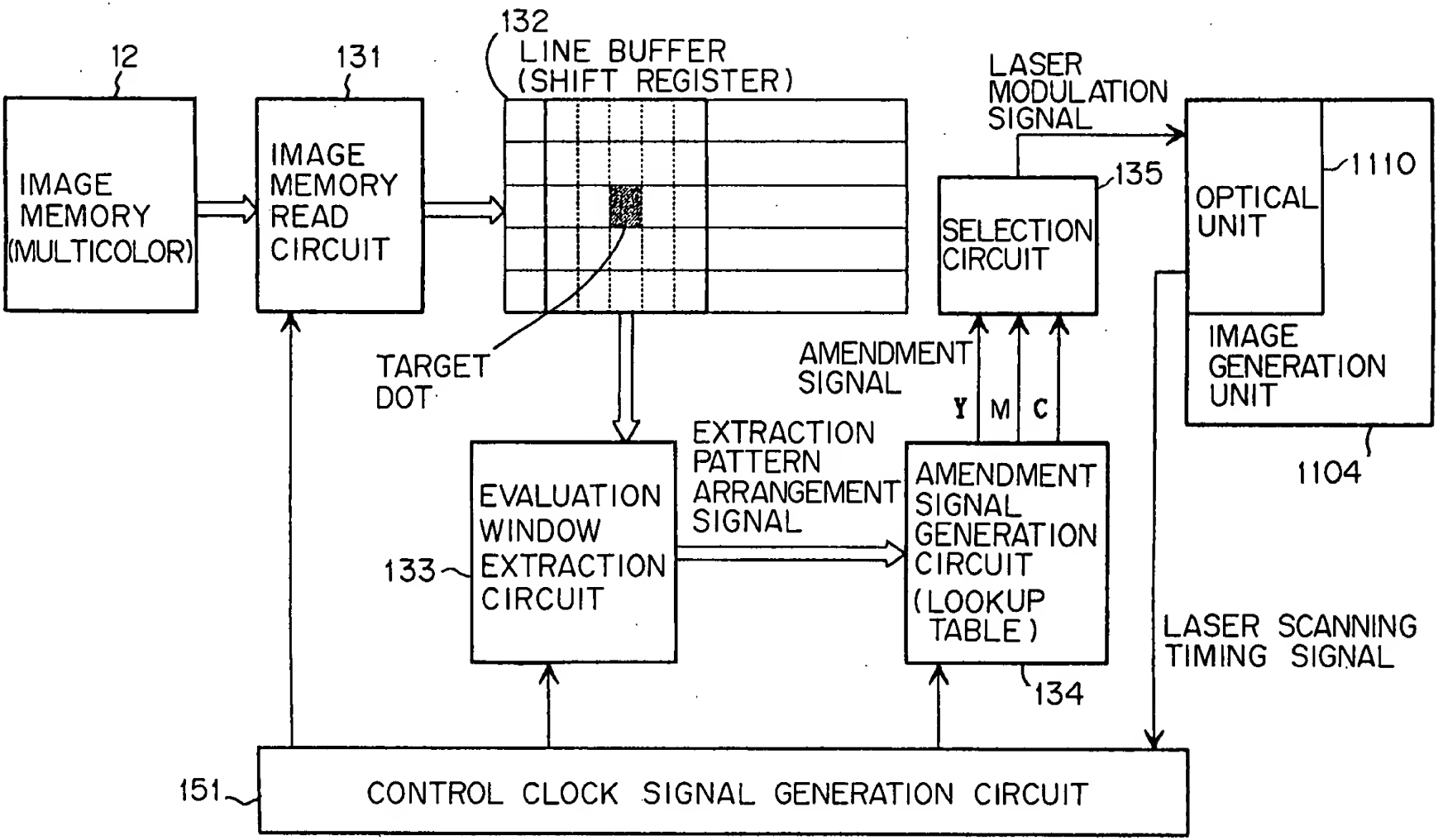
12
IMAGE MEMORY (MULTICOLOR)
131
IMAGE MEMORY READ CIRCUIT
132
LINE BUFFER (SHIFT REGISTER)
TARGET DOT
LASER MODULATION SIGNAL
135
SELECTION CIRCUIT
AMENDMENT SIGNAL
Y
M
C
1110
OPTICAL UNIT
IMAGE GENERATION UNIT
1104
EXTRACTION PATTERN ARRANGEMENT SIGNAL
133
EVALUATION WINDOW EXTRACTION CIRCUIT
AMENDMENT SIGNAL GENERATION CIRCUIT (LOOKUP TABLE)
134
LASER SCANNING TIMING SIGNAL
151
CONTROL CLOCK SIGNAL GENERATION CIRCUIT

FIG. 10

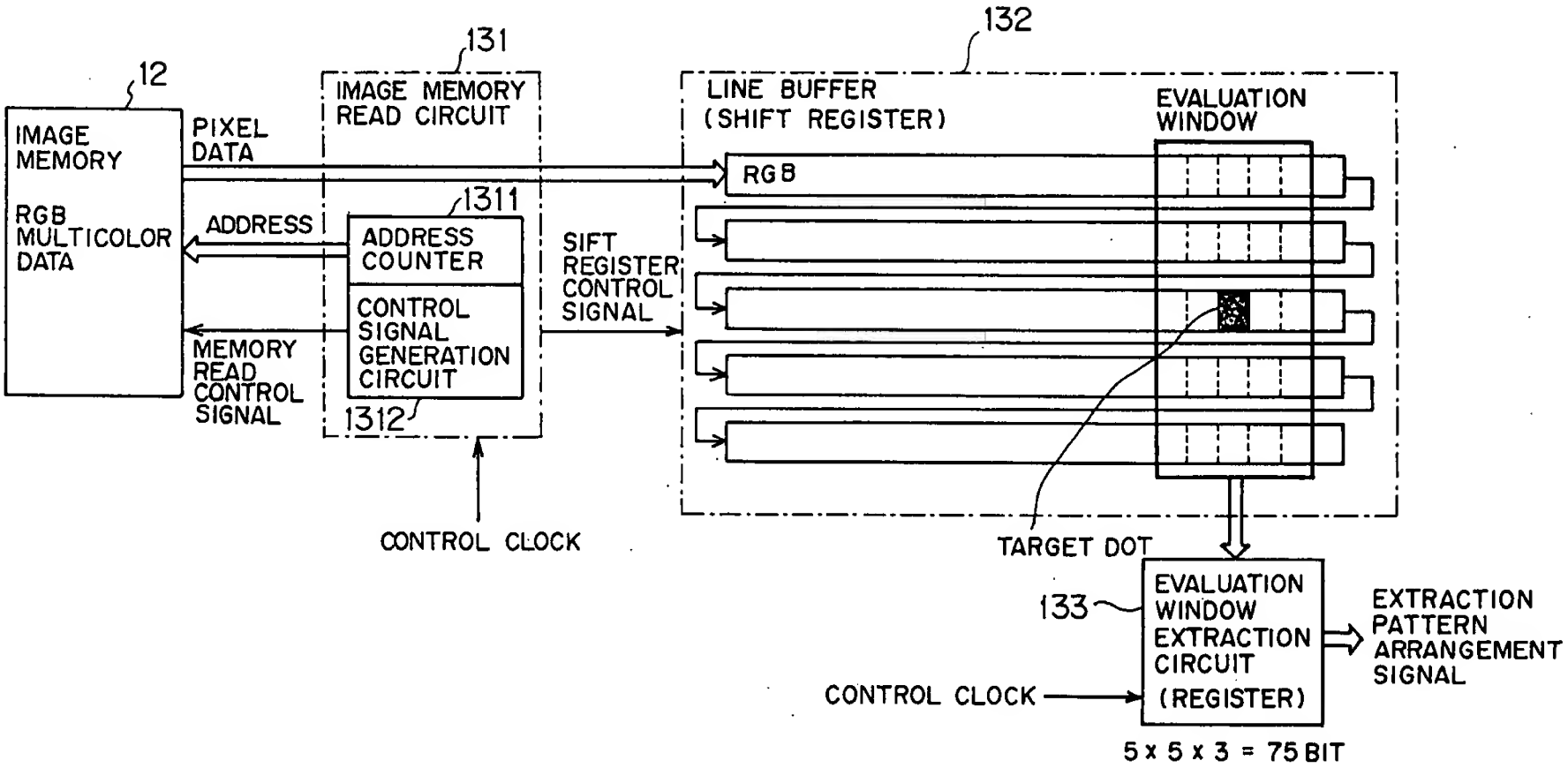
12
IMAGE MEMORY
RGB MULTICOLOR DATA
PIXEL DATA
ADDRESS
MEMORY READ CONTROL SIGNAL
131
IMAGE MEMORY READ CIRCUIT
1311
ADDRESS COUNTER
CONTROL SIGNAL GENERATION CIRCUIT
1312
SIFT REGISTER CONTROL SIGNAL
CONTROL CLOCK
132
LINE BUFFER (SHIFT REGISTER)
EVALUATION WINDOW
RGB
TARGET DOT
133
EVALUATION WINDOW EXTRACTION CIRCUIT (REGISTER)
CONTROL CLOCK
EXTRACTION PATTERN ARRANGEMENT SIGNAL
5 x 5 x 3 = 75 BIT

FIG. 11

000660 "2818560

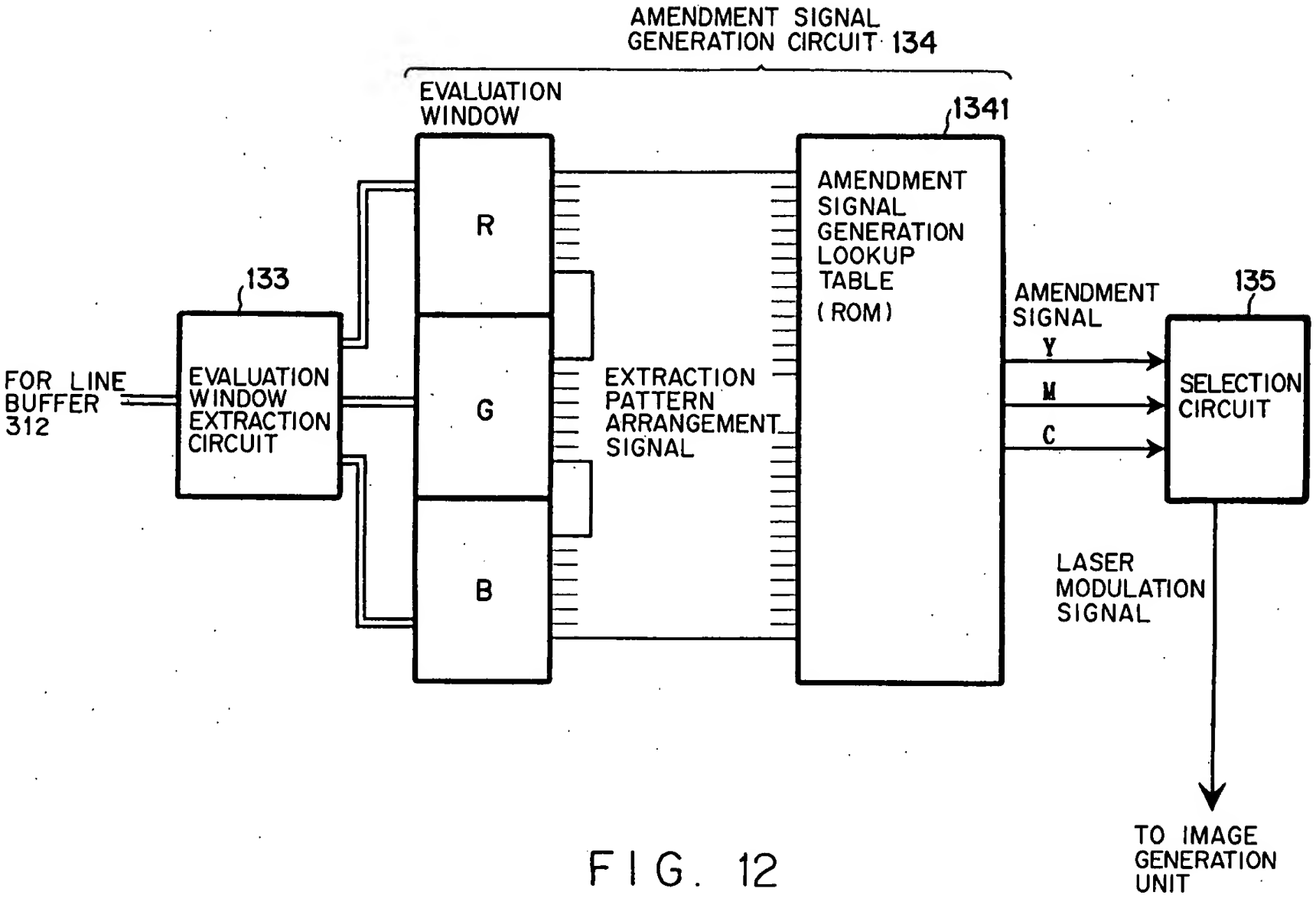

FIG. 12

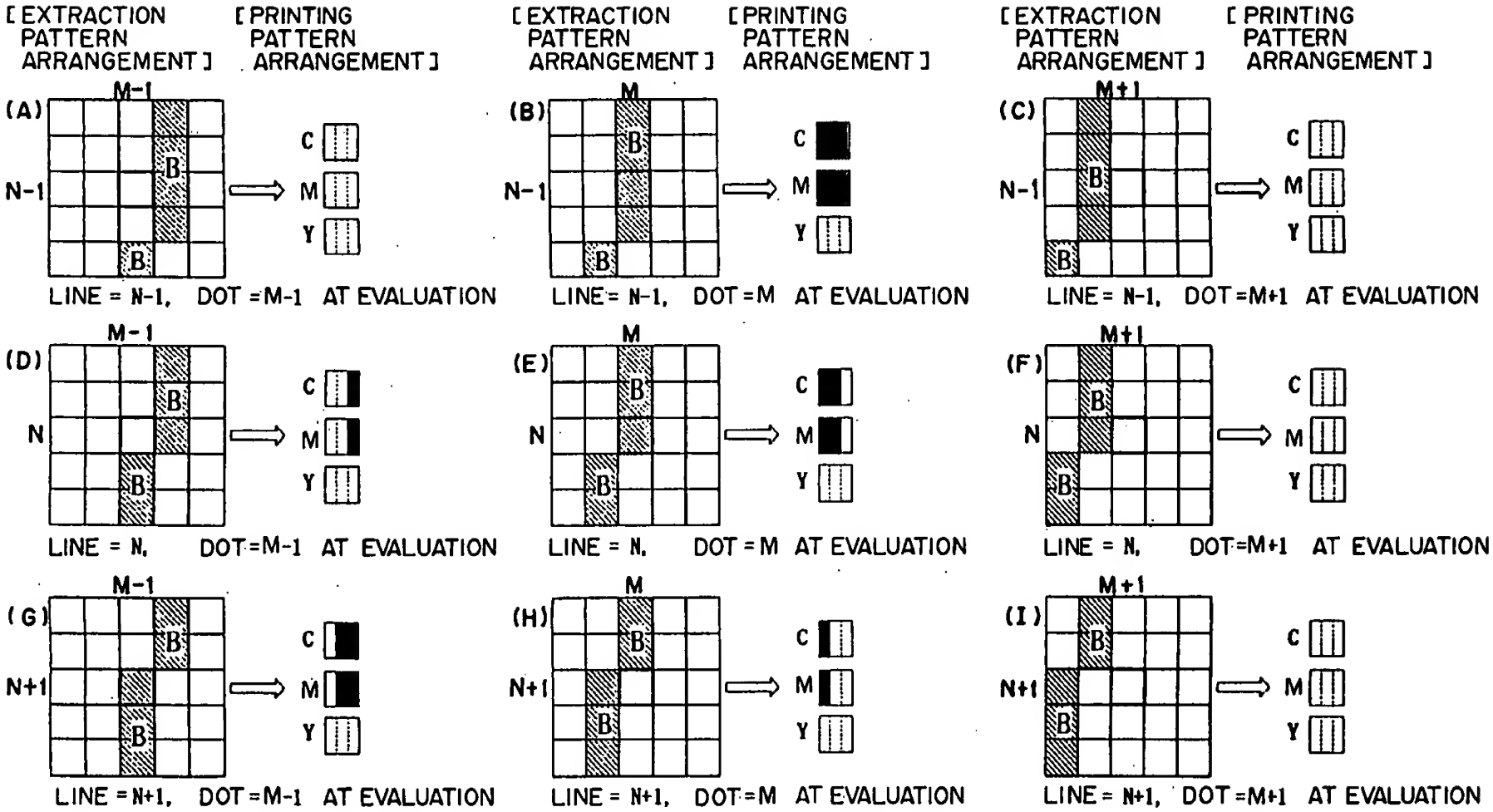
[EXTRACTION PATTERN ARRANGEMENT]
[PRINTING PATTERN ARRANGEMENT]
(A)
M-1
N-1
B
C
M
Y
LINE = N-1, DOT = M-1 AT EVALUATION
(B)
M
N-1
LINE = N-1, DOT = M AT EVALUATION
(C)
M+1
N-1
LINE = N-1, DOT = M+1 AT EVALUATION
(D)
N
LINE = N, DOT = M-1 AT EVALUATION
(E)
LINE = N, DOT = M AT EVALUATION
(F)
LINE = N, DOT = M+1 AT EVALUATION
(G)
N+1
LINE = N+1, DOT = M-1 AT EVALUATION
(H)
LINE = N+1, DOT = M AT EVALUATION
(I)
LINE = N+1, DOT = M+1 AT EVALUATION

FIG. 13

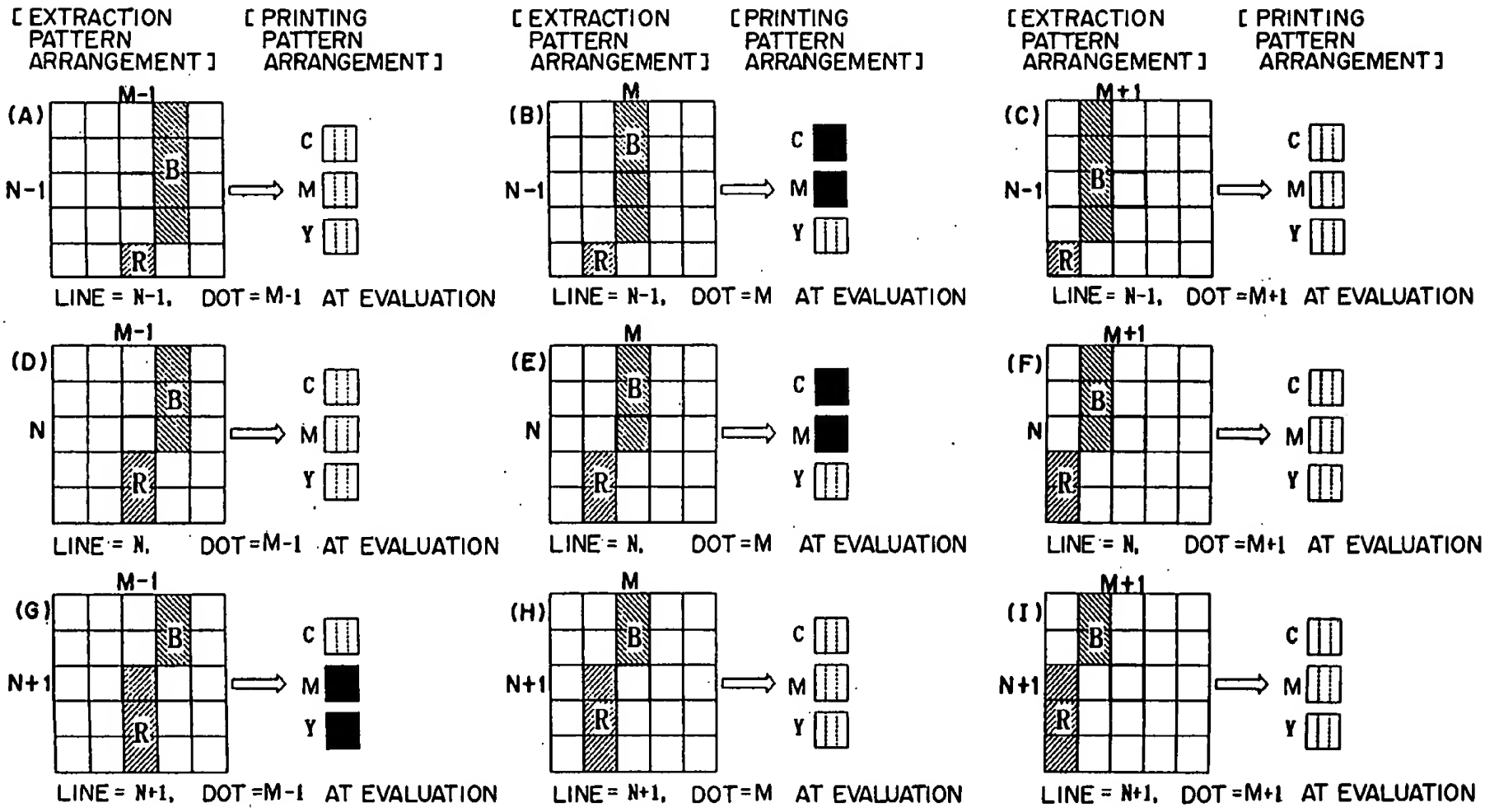
[EXTRACTION PATTERN ARRANGEMENT]
[PRINTING PATTERN ARRANGEMENT]
(A)
M-1
N-1
B
R
C
M
Y
LINE = N-1, DOT = M-1 AT EVALUATION
(B)
M
N-1
B
R
C
M
Y
LINE = N-1, DOT = M AT EVALUATION
(C)
M+1
N-1
B
R
C
M
Y
LINE = N-1, DOT = M+1 AT EVALUATION
(D)
M-1
N
B
R
C
M
Y
LINE = N, DOT = M-1 AT EVALUATION
(E)
M
N
B
R
C
M
Y
LINE = N, DOT = M AT EVALUATION
(F)
M+1
N
B
R
C
M
Y
LINE = N, DOT = M+1 AT EVALUATION
(G)
M-1
N+1
B
R
C
M
Y
LINE = N+1, DOT = M-1 AT EVALUATION
(H)
M
N+1
B
R
C
M
Y
LINE = N+1, DOT = M AT EVALUATION
(I)
M+1
N+1
B
R
C
M
Y
LINE = N+1, DOT = M+1 AT EVALUATION

FIG. 14

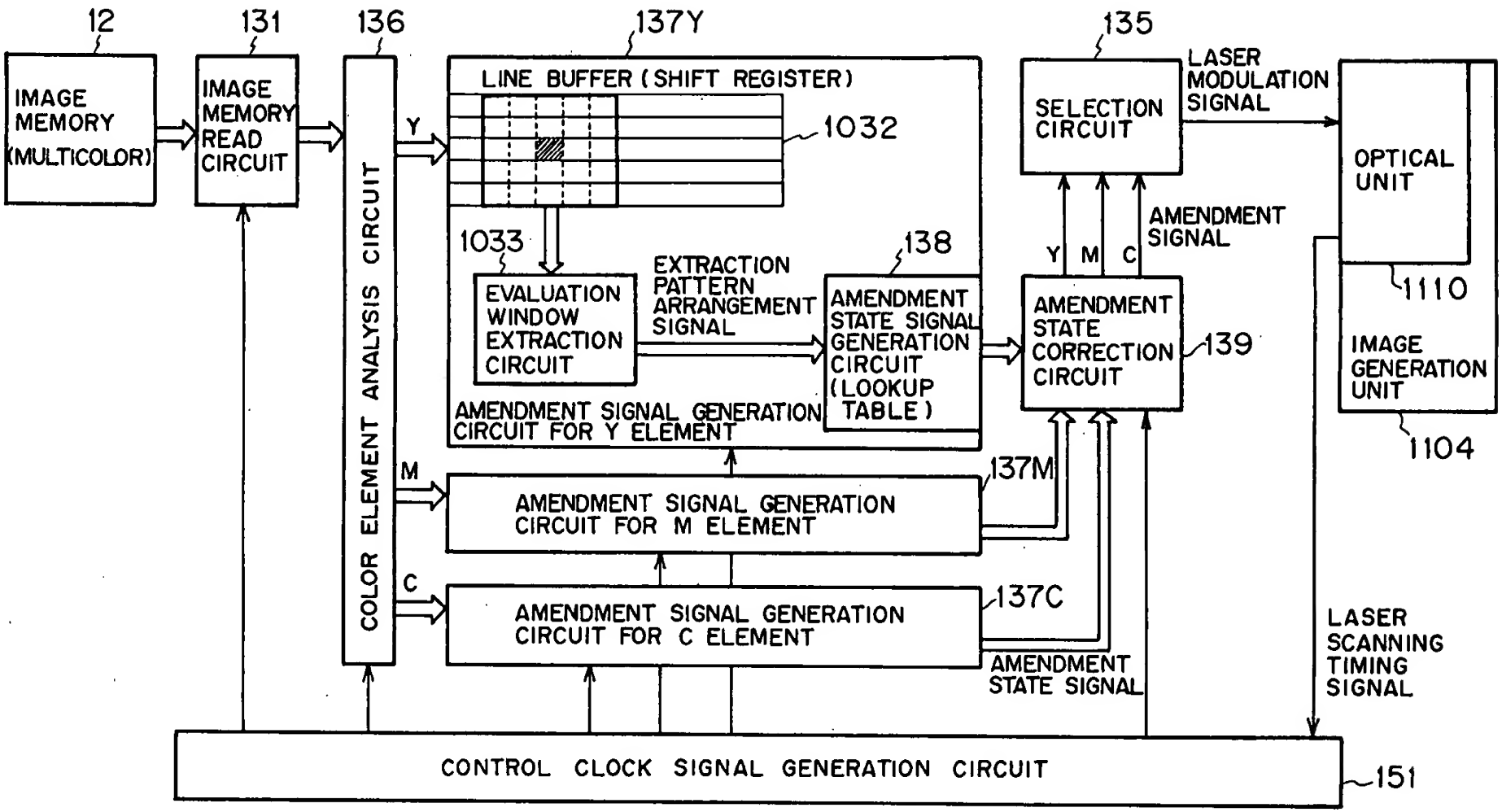
12
IMAGE MEMORY (MULTICOLOR)
131
IMAGE MEMORY READ CIRCUIT
136
COLOR ELEMENT ANALYSIS CIRCUIT
Y
M
C
137Y
LINE BUFFER (SHIFT REGISTER)
1032
1033
EVALUATION WINDOW EXTRACTION CIRCUIT
EXTRACTION PATTERN ARRANGEMENT SIGNAL
138
AMENDMENT STATE SIGNAL GENERATION CIRCUIT (LOOKUP TABLE)
AMENDMENT SIGNAL GENERATION CIRCUIT FOR Y ELEMENT
137M
AMENDMENT SIGNAL GENERATION CIRCUIT FOR M ELEMENT
137C
AMENDMENT SIGNAL GENERATION CIRCUIT FOR C ELEMENT
135
SELECTION CIRCUIT
LASER MODULATION SIGNAL
AMENDMENT SIGNAL
AMENDMENT STATE CORRECTION CIRCUIT
139
AMENDMENT STATE SIGNAL
OPTICAL UNIT
1110
IMAGE GENERATION UNIT
1104
LASER SCANNING TIMING SIGNAL
CONTROL CLOCK SIGNAL GENERATION CIRCUIT
151

FIG. 15

0066601 EP1662560

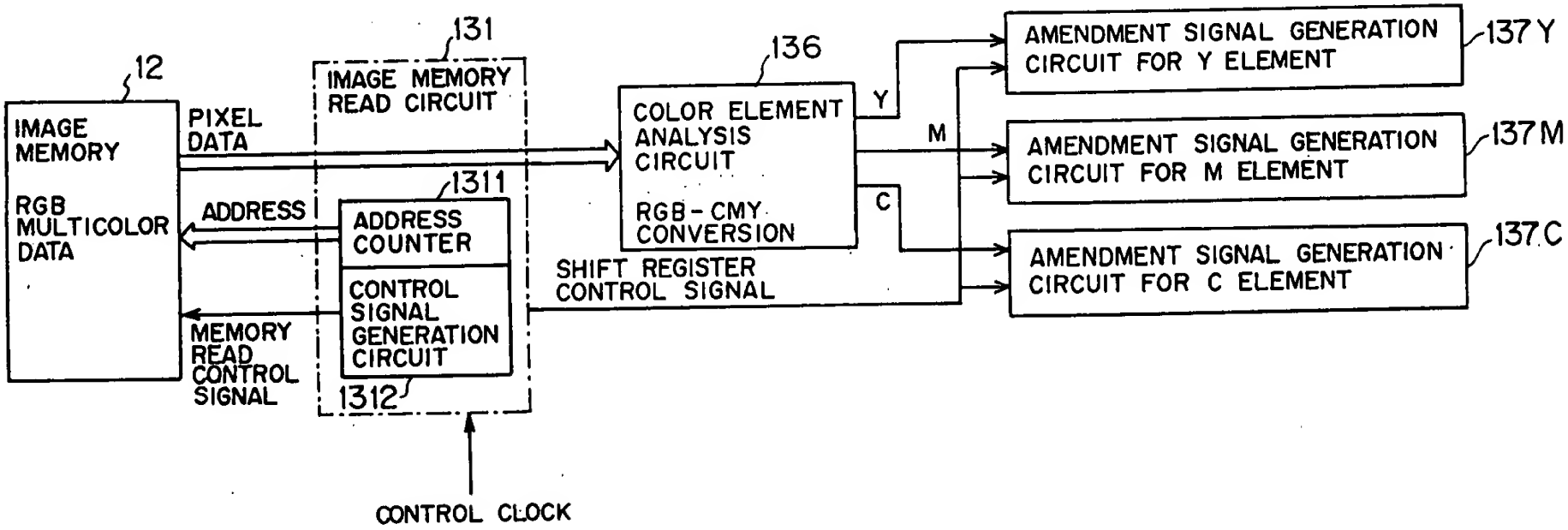

FIG. 16

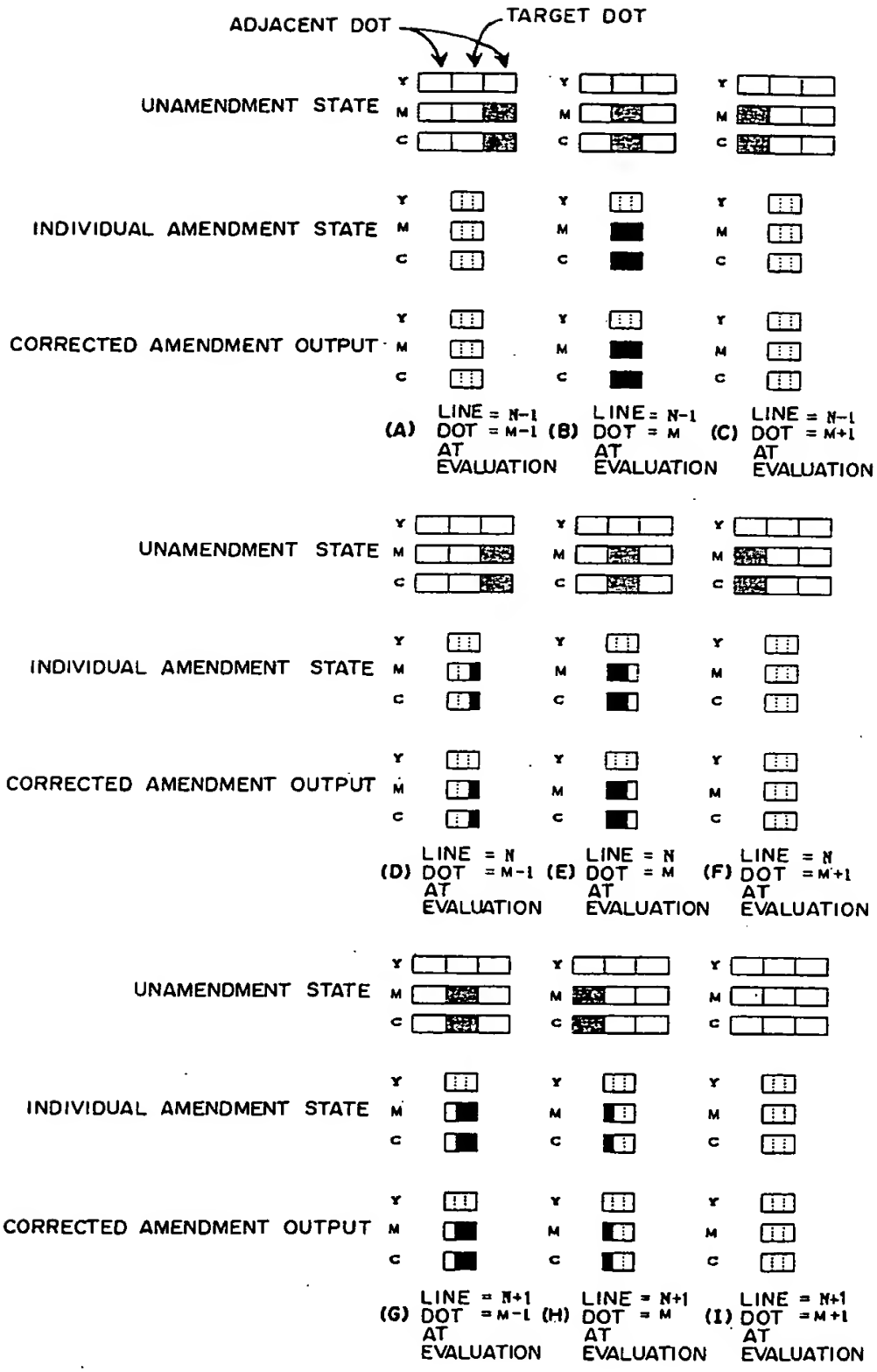
ADJACENT DOT
TARGET DOT
UNAMENDMENT STATE
INDIVIDUAL AMENDMENT STATE
CORRECTED AMENDMENT OUTPUT
Y
M
C
(A) LINE = N-1 DOT = M-1 AT EVALUATION
(B) LINE = N-1 DOT = M AT EVALUATION
(C) LINE = N-1 DOT = M+1 AT EVALUATION
(D) LINE = N DOT = M-1 AT EVALUATION
(E) LINE = N DOT = M AT EVALUATION
(F) LINE = N DOT = M+1 AT EVALUATION
(G) LINE = N+1 DOT = M-1 AT EVALUATION
(H) LINE = N+1 DOT = M AT EVALUATION
(I) LINE = N+1 DOT = M+1 AT EVALUATION

FIG. 17

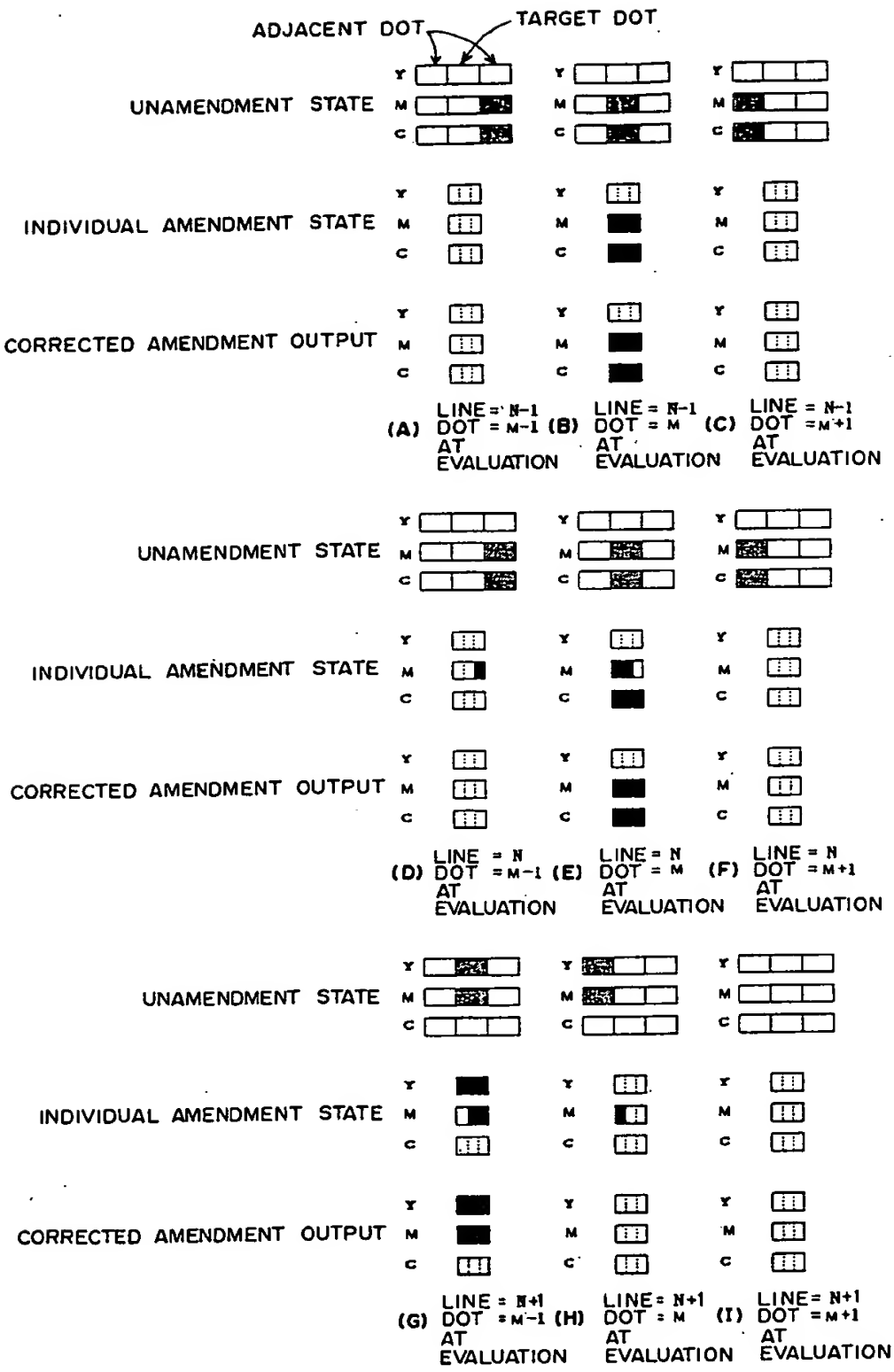
ADJACENT DOT
TARGET DOT
UNAMENDMENT STATE
INDIVIDUAL AMENDMENT STATE
CORRECTED AMENDMENT OUTPUT
Y
M
C
(A) LINE = N-1 DOT = M-1 AT EVALUATION
(B) LINE = N-1 DOT = M AT EVALUATION
(C) LINE = N-1 DOT = M+1 AT EVALUATION
(D) LINE = N DOT = M-1 AT EVALUATION
(E) LINE = N DOT = M AT EVALUATION
(F) LINE = N DOT = M+1 AT EVALUATION
(G) LINE = N+1 DOT = M-1 AT EVALUATION
(H) LINE = N+1 DOT = M AT EVALUATION
(I) LINE = N+1 DOT = M+1 AT EVALUATION

FIG. 18

0006E0 E8h8E960

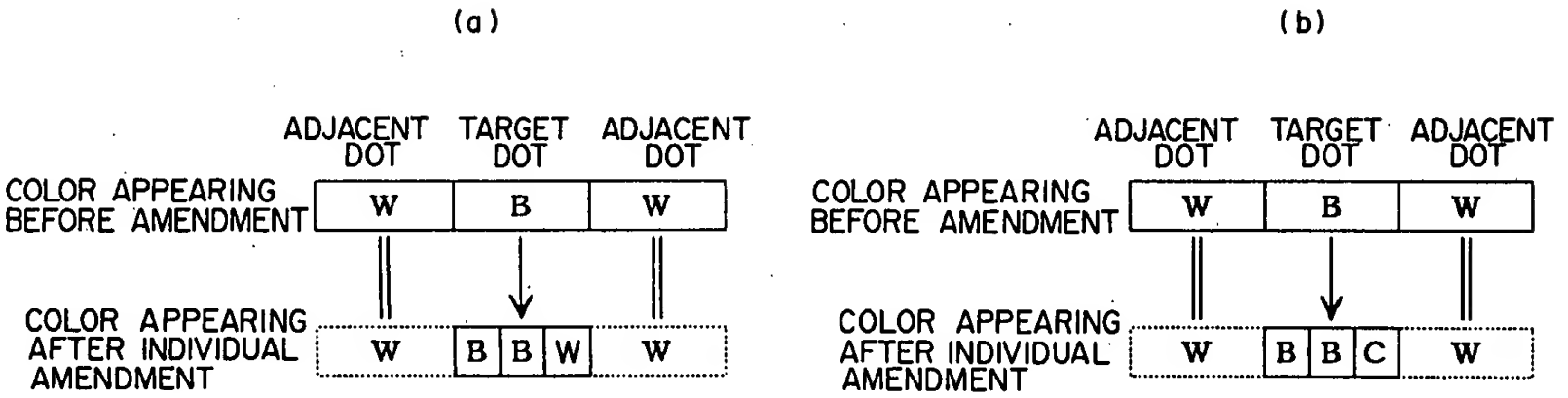

FIG. 19

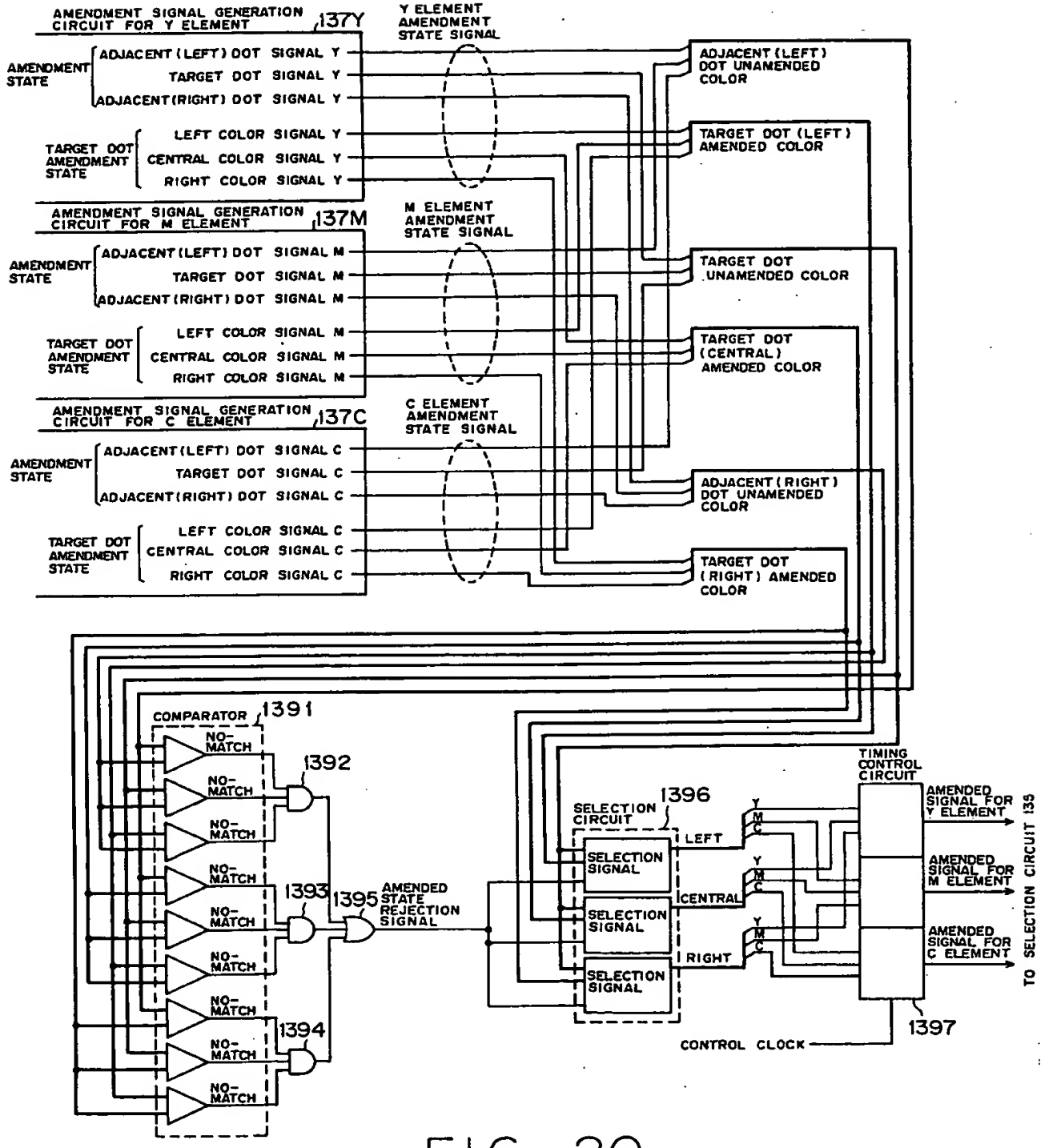
AMENDMENT SIGNAL GENERATION CIRCUIT FOR Y ELEMENT
137Y
AMENDMENT STATE
ADJACENT (LEFT) DOT SIGNAL Y
TARGET DOT SIGNAL Y
ADJACENT (RIGHT) DOT SIGNAL Y
TARGET DOT AMENDMENT STATE
LEFT COLOR SIGNAL Y
CENTRAL COLOR SIGNAL Y
RIGHT COLOR SIGNAL Y
Y ELEMENT AMENDMENT STATE SIGNAL
AMENDMENT SIGNAL GENERATION CIRCUIT FOR M ELEMENT
137M
AMENDMENT STATE
ADJACENT (LEFT) DOT SIGNAL M
TARGET DOT SIGNAL M
ADJACENT (RIGHT) DOT SIGNAL M
TARGET DOT AMENDMENT STATE
LEFT COLOR SIGNAL M
CENTRAL COLOR SIGNAL M
RIGHT COLOR SIGNAL M
M ELEMENT AMENDMENT STATE SIGNAL
AMENDMENT SIGNAL GENERATION CIRCUIT FOR C ELEMENT
137C
AMENDMENT STATE
ADJACENT (LEFT) DOT SIGNAL C
TARGET DOT SIGNAL C
ADJACENT (RIGHT) DOT SIGNAL C
TARGET DOT AMENDMENT STATE
LEFT COLOR SIGNAL C
CENTRAL COLOR SIGNAL C
RIGHT COLOR SIGNAL C
C ELEMENT AMENDMENT STATE SIGNAL
ADJACENT (LEFT) DOT UNAMENDED COLOR
TARGET DOT (LEFT) AMENDED COLOR
TARGET DOT UNAMENDED COLOR
TARGET DOT (CENTRAL) AMENDED COLOR
ADJACENT (RIGHT) DOT UNAMENDED COLOR
TARGET DOT (RIGHT) AMENDED COLOR
COMPARATOR
1391
NO-MATCH
1392
1393
1394
1395
AMENDED STATE REJECTION SIGNAL
SELECTION CIRCUIT
1396
SELECTION SIGNAL
LEFT
CENTRAL
RIGHT
Y
M
C
TIMING CONTROL CIRCUIT
AMENDED SIGNAL FOR Y ELEMENT
AMENDED SIGNAL FOR M ELEMENT
AMENDED SIGNAL FOR C ELEMENT
TO SELECTION CIRCUIT 135
CONTROL CLOCK
1397

FIG. 20

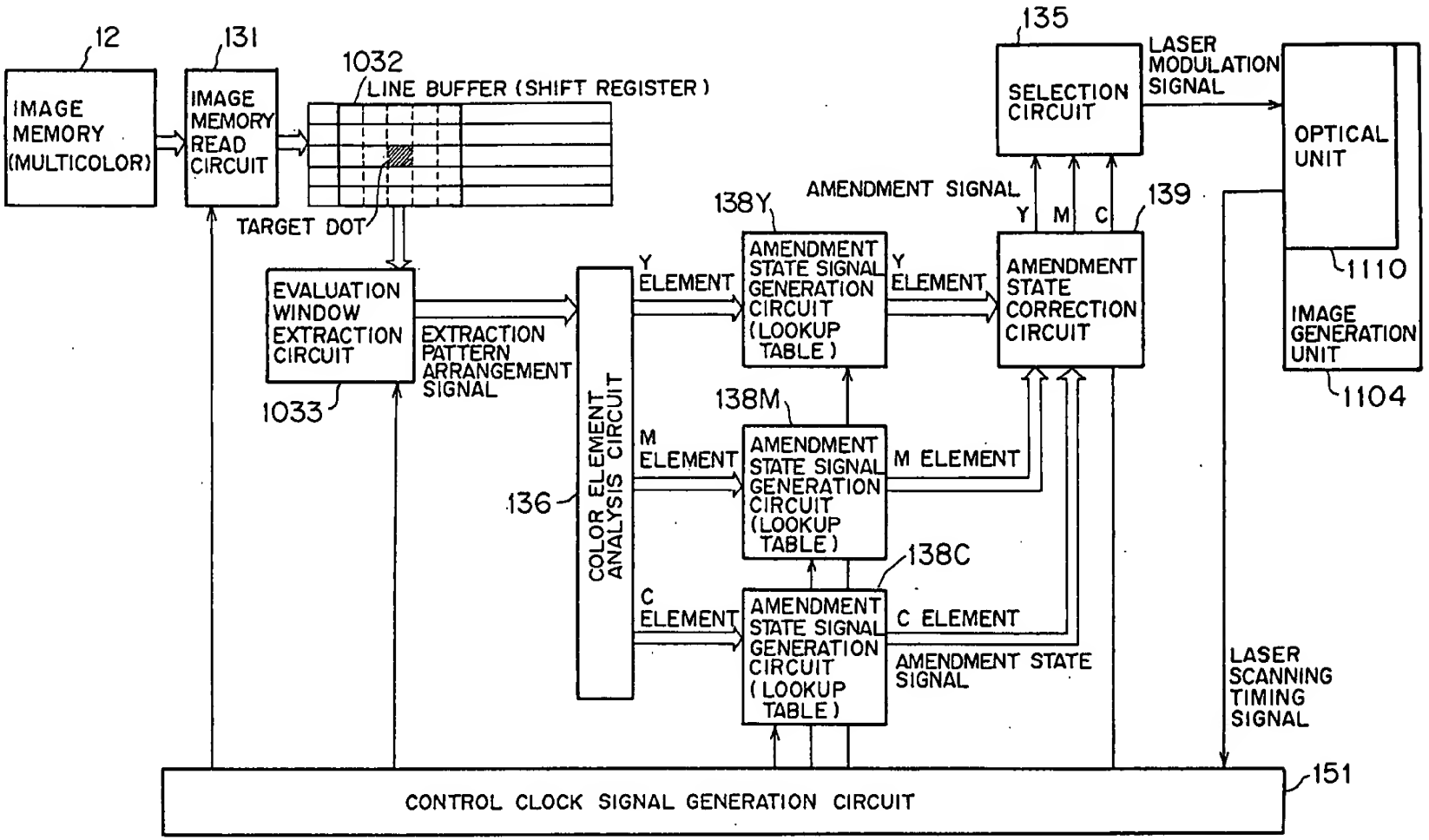
12
IMAGE MEMORY (MULTICOLOR)
131
IMAGE MEMORY READ CIRCUIT
1032
LINE BUFFER (SHIFT REGISTER)
TARGET DOT
EVALUATION WINDOW EXTRACTION CIRCUIT
1033
EXTRACTION PATTERN ARRANGEMENT SIGNAL
136
COLOR ELEMENT ANALYSIS CIRCUIT
Y ELEMENT
M ELEMENT
C ELEMENT
138Y
AMENDMENT STATE SIGNAL GENERATION CIRCUIT (LOOKUP TABLE)
138M
AMENDMENT STATE SIGNAL GENERATION CIRCUIT (LOOKUP TABLE)
138C
AMENDMENT STATE SIGNAL GENERATION CIRCUIT (LOOKUP TABLE)
AMENDMENT SIGNAL
Y
M
C
139
AMENDMENT STATE CORRECTION CIRCUIT
135
SELECTION CIRCUIT
LASER MODULATION SIGNAL
OPTICAL UNIT
1110
IMAGE GENERATION UNIT
1104
LASER SCANNING TIMING SIGNAL
CONTROL CLOCK SIGNAL GENERATION CIRCUIT
151

FIG. 21

000650 "EP1062560

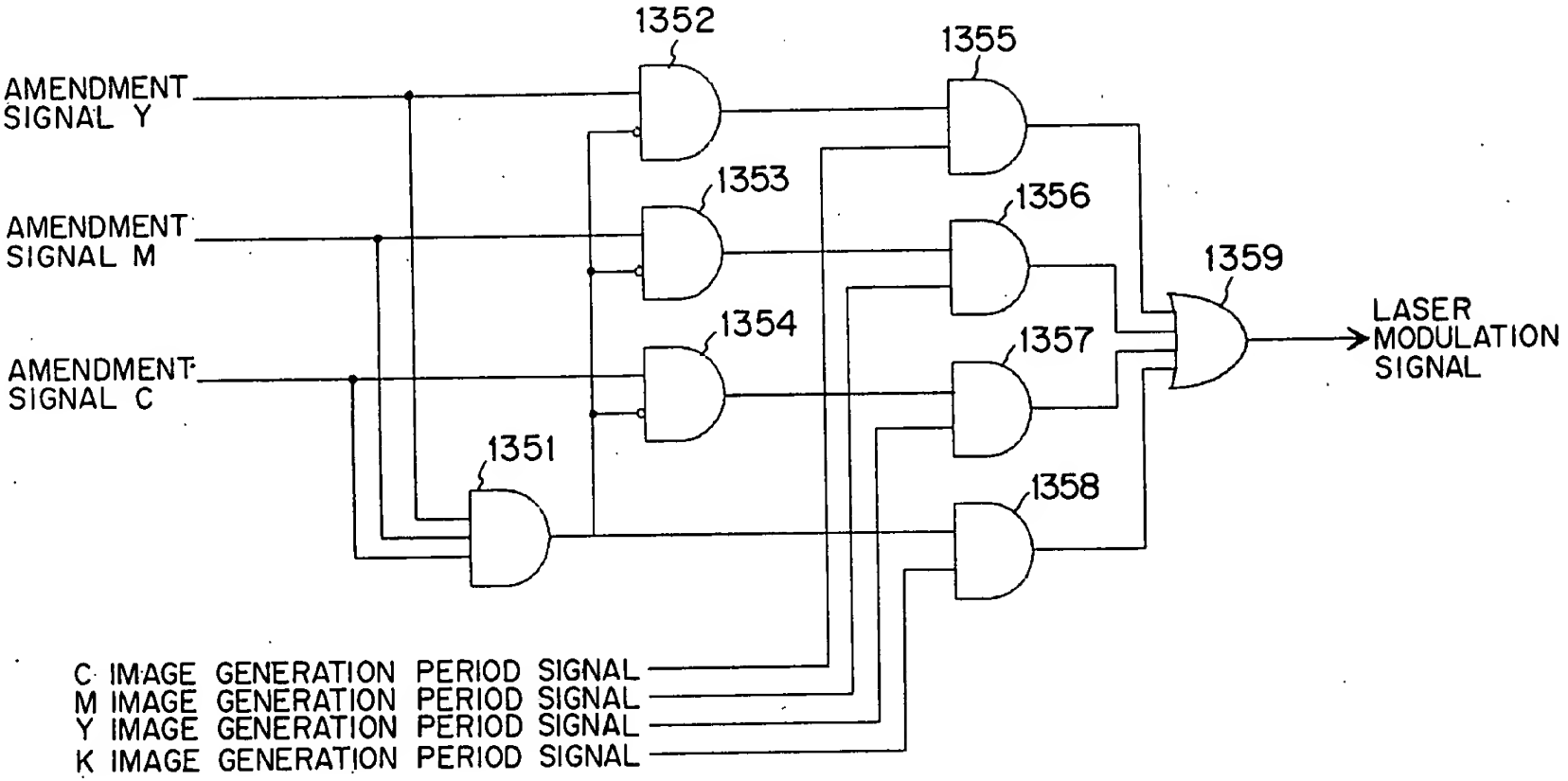

FIG. 22